

CURRICULUM VITAE

PERSONAL DETAILS

Mgr. PETRA SUDZINOVÁ

23. 4. 1989, Prague

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CURRENT POSITION

2013 – Present

Laboratory of Microbial Genetics and Gene Expression

Institute of Microbiology, CAS,

Ph.D. student

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EDUCATION

2013 – present: PhD education

Faculty: Faculty of Science, Charles University in Prague

Program: Molecular and Cell Biology, Genetics and Virology

Doctoral Thesis: Factors affecting gene expression in *Bacillus subtilis*

Supervisor: Doc. Mgr. Libor Krásný, Ph.D., Laboratory of Microbial Genetics and Gene Expression, Institute of Microbiology, CAS

2011 – 2013: Master education

Faculty: Faculty of Science, Charles University in Prague

Program: Biology

Diploma Thesis: Characterization of the Held protein from *Bacillus subtilis*

Supervisor: Doc. Mgr. Libor Krásný, Ph.D., Laboratory of Microbial Genetics and Gene Expression, Institute of Microbiology, CAS

2008 – 2011: Bachelor education

Faculty: Faculty of Science, Charles University in Prague

Program: Special Chemical and Biologicals Programmes

Supervisor: Doc. Mgr. Libor Krásný, Ph.D., Laboratory of Microbial Genetics and Gene Expression, Institute of Microbiology, CAS

MAIN SCIENTIFIC INTERESTS

Transcription in *B. subtilis*
RNAP and its binding partners

SCIENTIFIC EXPERIENCE

DNA, RNA and recombinant protein purification
Bacterial cultivation (*B. subtilis*, *E. coli*, *M. smegmatis*)
RT-qPCR
Thin-layer chromatography (TLC)
³H-uridine labelling of total RNA
Work with proteins – Western blot, EMSA assay, transcription in vitro
RNAseq (libraries preparation)

CONFERENCES – lecture presentation

2014: GSGM; Průhonice, Czech Republic

Lecture: Od neznámého proužku k novému transkripčnímu faktoru: příběh proteinu HeID

2015: Hot Topics in Microbiology; High Tatras, Slovakia

Lecture: HeID, a Novel Transcription Factor from *Bacillus subtilis*, and its Role in the Cell

2017: Biomania Brno; Czech Republic

Lecture: HeID and its role in the cell

2018 FEBS Congress; Prague, Czech Republic

Lecture HeID: Structure and Function

2019: RNA club; Prague, Czech Republic

Lecture: Regulation of rRNA transcription by DNA topology in *Bacillus subtilis*

CONFERENCES – poster presentation

2013: New Approaches and Concepts in Microbiology; Heidelberg, Germany

2014: FEBS EMBO Congress; Paris, France

2014: RNA club; Prague, Czech Republic

2015: Gram-positive Meeting; Monte Catini, Italy

2015: RNA club; České Budějovice, Czech Republic

2015: Biomania Brno; Czech Republic

2016: Bacell; Paris, France

2016: RNA club; Brno, Czech Republic

2017: Gram-positive Meeting; Berlin, Germany

2018: Bacell; Bath, United Kingdom

2018: RNA club; Prague, Czech Republic

AWARDS, GRANTS AND FELLOWSHIPS

2014: 2nd place for best presentation on Genetic conference GSGM 2014

2015: Travel fellowship from FEMS to attend Hot Topics in Microbiology

2015 – 2017: Grant Regulation of transcription in *Bacillus subtilis* by DNA topology from Grant Agency of Charles University (GAUK No. 186815)

2017: Travel fellowship from foundation “Nadání Josefa, Marie a Zdeňky Hlávkových”

2018: Fellowship to attend 18th Young Scientists’ Forum before main FEBS Congress.

EDUCATION EXPERIENCE

Consultation of experimental part of Bachelor Thesis

Reviewer of Bachelor Thesis

LIST OF PUBLICATIONS

Characterization of Held, an interacting partner of RNA polymerase from *Bacillus subtilis*.

Wiedermannová J, Sudzinová P, Kovař T, Rabatinová A, Šanderová H, Ramaniuk O, Rittich Š, Dohnálek J, Fu Z, Halada P, Lewis P, Krásný L.

Nucleic Acids Res. 2014 Apr;42(8):5151-63. PMID: 24520113

Spx, the central regulator of the heat and oxidative stress response in *B. subtilis*, can repress transcription of translation-related genes.

Schäfer H, Heinz A, Sudzinová P, Voř M, Hantke I, Krásný L, Turgay K.

Mol Microbiol. 2019 Feb;111(2):514-533. PMID: 30480837

Domain structure of Held, an interaction partner of *Bacillus subtilis* RNA polymerase.

Kovař T*, Sudzinová P*, Perháčová T, Trundová M, Skálová T, Fejfarová K, Šanderová H, Krásný L, Duřková J, Dohnálek J.

*These authors contributed equally to the paper as first authors.

FEBS Lett. 2019 May;593(9):996-1005. PMID: 30972737

The torpedo effect in *Bacillus subtilis*: RNase J1 resolves stalled transcription complexes.

Šiková M*, Wiedermannová J*, Převorovský M, Barvík I, Sudzinová P, Kofroňová O, Benada O, Šanderová H, Condon C, Krásný L.

*These authors contributed equally to the paper as first authors.

EMBO J. 2020 Feb 3;39(3):e102500. PMID: 31840842

The alarmones (p)ppGpp are part of the heat shock response of *Bacillus subtilis*.

Schäfer H, Beckert B, Frese CK, Steinchen W, Nuss AM, Beckstette M, Hantke I, Driller K, [Sudzinová P](#), Krásný L, Kaefer V, Dersch P, Bange G, Wilson DN, Turgay K
PLoS Genet. 2020 Mar 16;16(3):e1008275. PMID: 32176689

Mycobacterial HeLD is a nucleic acids-clearing factor for RNA polymerase.

Kouba T*, Koval' T*, Sudzinová P*, Pospíšil J, Brezovská B, Hnilicová J, Šanderová H, Janoušková M, Šíková M, Halada P, Sýkora M, Barvík I, Nováček J, Trundová M, Dušková J, Skálová T, Chon U, Murakami KS, Dohnálek J, Krásný L

*These authors contributed equally to the paper as first authors.

Accepted for publication in Nature Communications

Temporary DOI: 10.1101/2020.07.20.211821 (BioRxiv)

Effects of DNA topology on transcription from *rRNA* promoters in *Bacillus subtilis*

[Sudzinová P](#), Kambová M, Ramaniuk O, Benda M, Šanderová H, Krásný L

In preparation, will be submitted to Microorganisms

Lipophosphonoxins II: Design, Synthesis, and Properties of Novel Broad Spectrum Antibacterial Agents.

Seydlová G, Pohl R, Zborníková E, Ehn M, Šimák O, Panova N, Kolář M, Bogdanová K, Večeřová R, Fišer R, Šanderová H, Vítovská D, [Sudzinová P](#), Pospíšil J, Benada O, Křížek T, Sedlák D, Bartůněk P, Krásný L, Rejman D.

J Med Chem. 2017 Jul 27;60(14):6098-6118.

PMID: 28654257